



UNITED STATES PATENT AND TRADEMARK OFFICE

MN
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,436	11/12/1999	JEFFREY MARK ACHTERMANN	AUS919990655US1	9315
35525	7590	07/02/2007		
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			EXAMINER TODD, GREGORY G	
			ART UNIT 2157	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/438,436	Applicant(s) ACHTERMANN ET AL.	
	Examiner Gregory G. Todd	Art Unit 2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-13,15,17-24,26 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-13,15,17-24,26 and 28-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to applicant's amendment filed, 11 April 2007, of application filed, with the above serial number, on 12 November 1999 in which claims 1, 4, 11-12, 15, 22-23, 26, and 33 have been amended and claims 3, 14, and 25 have been cancelled. Claims 1-2, 4, 6-13, 15, 17-24, 26, and 28-33 are therefore pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 recites the limitation "claim 3" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "claim 14" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "claim 25" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented

Art Unit: 2157

and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 12-13, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky (hereinafter "Zolnowsky", 6,779,182) in view of Kumpf et al (hereinafter "Kumpf", 6,289,371).

Zolnowsky teaches, substantially, the invention as claimed including job and thread prioritized scheduled (see abstract).

As per Claims 1, 12, and 23, Zolnowsky discloses a connection scheduling method, operable in a node of a networked data processing system comprising a plurality of nodes, wherein Zolnowsky discloses:

determining if a job is available for scheduling (job scheduling) (at least col. 5, lines 13-21);

determining, in response to said step of determining if said job is available, if a session is available, wherein said session is included in a pool of sessions (threads), said pool of sessions having a preselected one of a set of priority levels corresponding to a priority level of said job and wherein said session effects an execution of said job (runnable threads in queue of threads with dispatch priority) (at least col. 6, lines 33-65);

creating a connection to a target system for execution of said job (target processor being selected) (at least col. 10, lines 21-42); and

launching said session to effect said execution of said job, if said session is available (thread (and processor / job) selected for execution) (at least col. 7, lines 17-28; col. 8, lines 43-60).

While Zolnowsky does teach scheduling errors in thread queues (at least col. 8, lines 3-17), Zolnowsky fails to explicitly teach the step of launching an error handling thread in response to an error condition, said error handling thread releasing said session and wherein said target system is another node of the networked data processing system. However, the use and advantages for using such a system is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Kumpf. Kumpf teaches launching a thread and encountering an error, at which time, an error recovery algorithm is executed and the thread finishes (at least col. 7, lines 41-59) and also the system operating on a client (node) and in a client-server environment (at least col. 4, lines 1-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Kumpf's error recovery algorithm into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Kumpf teaches, when an error does occur, it is desirable to execute an algorithm to handle the error and release the session by 'finishing' it.

As per Claims 2, 13, and 24.

session comprises a thread (thread) (at least col. 6, lines 33-65).

5. Claims 4, 15, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Kumpf and further in view of Sayan et al (hereinafter "Sayan", 6,477,569).

Zolnowsky and Kumpf do not explicitly teach determining if connection is an existing connection, and creating the connection is performed if the connection is not an

Art Unit: 2157

existing connection, and wherein said session is launched using said existing network connection if said network connection is an existing network connection such that said existing network connection supports multiple logical sessions. However, Sayan teaches a client establishing a logical session with multiple services on multiple servers (at least col. 2, lines 26-38; col. 10, lines 52-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Sayan's connection creation into Zolnowsky and Kumpf's system as Sayan teaches a client requesting a connection and if there is already a connection, connecting, otherwise, creating a new connection.

6. Claims 6-9, 17-20, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Kumpf and further in view of Northrup (hereinafter "Northrup", 6,671,713).

As per Claims 6, 17, and 28.

Zolnowsky and Kumpf fail to explicitly disclose changing value of a job state from a first value to a second value in response to said launching of said error handling thread. Northrup teaches the use of a thread returning an error condition and "error" state (at least col. 56, lines 33-36; col. 55, lines 27-35; col. 27 line 66 - col. 28 line 15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of having a value being changed when an error occurs as Northrup discloses into Zolnowsky and Kumpf's system as this would reduce scheduling errors in Zolnowsky and Kumpf's system and define conditions of the thread.

As per Claims 7, 18, and 29.

the first value signaling that the job is available for scheduling (non-errors not being caught in verification step) (at least Zolnowsky col. 8, lines 11-17).

As per Claims 8, 19, and 30.

Zolnowsky teaches retrying the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session (at least Zolnowsky col. 8, lines 11-17; error resulting in selecting correct queue). Kumpf teaches finishing a thread when an error is encountered (at least col. 7, lines 41-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Kumpf's session release into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Kumpf teaches, when an error does occur, it is desirable to release and finish the session.

As per Claims 9, 20, and 31.

Zolnowsky and Kumpf fail to explicitly disclose the step of retrying to be repeated until a predetermined time interval has elapsed. However, the use and advantages for retrying tasks based on elapsed time is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Northrup (at least Northrup col. 10 line 49 - col. 11 line 18). Northrup discloses relaunching after a delay period after it attempts to relaunch immediately. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Northrup's time-interval thread launching into Zolnowsky and Kumpf's system because

Art Unit: 2157

this would further allow tasks that could not be completed and relaunched the second time to attempt again at a later time when there might be less network congestion, for example.

7. Claims 10-11, 21-22, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zolnowsky in view of Kumpf and Northrup and further in view of Rangarajan et al (hereinafter "Rangarajan", 6,260,077).

As per Claims 10, 21, and 32.

Zolnowsky, Kumpf and Northrup fail to explicitly disclose registering a callback method in response to an expiry of a predetermined time interval. However, the use and advantages for responding to a time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Rangarajan's responding to an expiry of an elapsed time into Zolnowsky, Kumpf and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Kumpf and Northrup's host computer (target system) upon the predetermined time interval.

As per Claims 11, 22, and 33.

Zolnowsky, Kumpf and Northrup fail to explicitly disclose the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session being performed in response to an invoking of a callback method by said

target system. However, the use and advantages for a target system responding to an elapsed time expiration is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Rangarajan (at least Rangarajan Abstract; col. 17, lines 13-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Rangarajan's responding to an expiry of an elapsed time into Zolnowsky, Kumpf and Northrup's system because this would invoke an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function and then return control to Zolnowsky, Kumpf and Northrup's host computer (target system) upon the predetermined time interval, and thus have the requested task be entered into the thread and be completed.

Response to Arguments

8. Applicant's arguments filed 11 April 2007 have been fully considered but they are not persuasive.

Applicant argues Zolnowsky alone, fails to teach creating a connection to a target system and operating in a network environment. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Kumpf teaches the system as outlined in the revised rejection.

Applicant's arguments with respect to claim 4, 15, and 26 have been considered but are moot in view of the new ground(s) of rejection.

As per Claims 8, 19, and 30, Applicant argues Zolnowsky does not teach the claims. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). To clarify, the rejection states that:

Zolnowsky teaches retrying the steps of determining if a job is available for scheduling, determining if a session is available, and launching said session (at least Zolnowsky col. 8, lines 11-17; error resulting in selecting correct queue). Kumpf teaches finishing a thread when an error is encountered (at least col. 7, lines 41-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Kumpf's session release into Zolnowsky as this would enhance and allow the system of Zolnowsky to be prepared for error handling and as Kumpf teaches, when an error does occur, it is desirable to release and finish the session.

As per Claims 11, 22, and 33, Applicant argues the determining is not performed in response to the callback method invoking. Applicants arguments are not persuasive. Rangarajan's system invokes an event to cause a thread to occur upon, for example an error, and allow the client application to perform its function (at least Rangarajan Abstract; col. 17, lines 13-39) and then return control to Zolnowsky, Kumpf and

Art Unit: 2157

Northrup's host computer (target system) upon the predetermined time interval, and thus have the requested task be entered into the thread and be completed.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited DeNap et al (thread manager providing fault tolerance), in addition to previously cited Chkodrov et al, Rhee et al, Hogle et al (col. 8-9; error handling and the use of exceptions) and Periwai et al (col. 12; error handling and the use of exceptions), Cohen et al, Bhagat et al, Silva et al ('760), Hanif et al, Dixon et al, Herbert et al, Brackett et al, Marshall, Teng, Batra, Behm et al, Davis et al,

Art Unit: 2157

Murray, Trugman, Morris et al, Sundararajan, Beaulieu et al, Farrell et al, Bigus, Silva et al ('537), and Coffman et al and Ross et al are cited for disclosing pertinent information related to the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G. Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory Todd



Patent Examiner

Technology Center 2100



ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100